

What we claim is:

1. A communication device comprising:
a connection processor for performing communications between
a user terminal and a network service provider apparatus;

5 an information monitor for reading datalink layer information
included in data transmitted from a source user terminal and for
monitoring whether or not communication request information to the
network service provider apparatus or shortcut communication
request information with a destination user terminal is included in
10 the datalink layer information; and

a controller for outputting the data to the network service
provider apparatus when the datalink layer information includes the
communication request information, and for outputting the data to the
destination user terminal when the datalink layer information
15 includes the shortcut communication request information.

2. The communication device as claimed in claim 1 wherein the
shortcut communication request information is encapsulated in the
datalink layer information.

3. The communication device as claimed in claim 2 wherein the
20 shortcut communication request information is encapsulated in an
Ethernet protocol within the datalink layer information.

4. The communication device as claimed in claim 2 wherein the
communication request information comprises a PPPoE protocol, and
the shortcut communication request information is encapsulated in
25 the PPPoE protocol within the datalink layer information.

5. The communication device as claimed in claim 1 wherein the
datalink layer information includes authentication information, and
the controller determines whether or not a shortcut communication
between the source user terminal and the destination user terminal is
30 allowed based on the authentication information to make the
connection processor output the data to the destination user terminal

when the shortcut communication is allowed.

6. The communication device as claimed in claim 5 wherein the authentication information is described in a format based on a RADIUS format, and the controller outputs the authentication information to a RADIUS server to determine whether or not the shortcut communication is allowed by referring to a verification result in the RADIUS server.

7. The communication device as claimed in any one of claims 1 to 6 wherein the controller is provided with a memory for holding address information of the source user terminal and the destination user terminal associated with a communication port, and makes the connection processor output the data through the communication port associated with the address information included in the shortcut communication request information when the data include the shortcut communication request information.

8. The communication device as claimed in any one of claims 1 to 6 wherein the connection processor suspends the communication with the network service provider apparatus when suspension request information of a connection with the network service provider apparatus is included in the communication request information as read by the information monitor.

9. The communication device as claimed in any one of claims 1 to 6 wherein the controller controls an output destination of the data by rewriting an MAC address included in the datalink layer information.

10. The communication device as claimed in any one of claims 1 to 6 wherein the controller determines whether or not a shortcut communication between the source user terminal and the destination user terminal is allowed by verifying the authentication information included in the datalink layer information from the source user terminal against the authentication information from the destination user terminal.

11. The communication device as claimed in claim 8 wherein the connection processor restarts the communication with the network service provider apparatus when restart request information of the connection with the network service provider apparatus is included in
5 the communication request information as read by the information monitor.